IN THE CLAIMS

The following is a listing of the claims in the present application with claims 1, 3, 4 and 8 shown as amended, claims 2 and 5-7 as deleted, and new claim 10 added:

Listing of Claims:

1. (Currently Amended) A method for producing ~~DME~~ dimethylether (DME), which comprises the steps of:

(i) introducing a feed gas mixture containing hydrogen and CO to a DME synthesis reactor, wherein the feed gas mixture is reacted in the presence of a methanol synthesis catalyst and an acid catalyst for the dehydration of methanol, to provide a crude product stream containing DME and CO_2;

(ii) separating the crude product stream into a CO_2 rich stream and a DME rich stream;

(iii) introducing the CO_2 rich stream to a reverse water gas shift (RWGS) reactor wherein it is reacted with hydrogen separately introduced in the presence of ~~a catalyst~~ an oxide catalyst to provide a CO rich stream, while recovering the DME rich stream as a product, the oxide catalyst being ZnO supported on or coprecipitated with an oxide selected from Al_2O_3, ZrO_2, MgO, SiO_2

and a mixture thereof, and the reaction in the reverse water gas reactor being carried out at a temperature ranging from 500 to 900 °C; and

(iv) recycling the CO rich stream to step (i).

2. (Cancelled).

3. (Currently Amended) The method of ~~claim 2~~ claim 1, wherein ~~the oxide catalyst is ZnO supported on or coprecipitated with an oxide selected from Cr_2O_3, Al_2O_3, ZrO_2, MgO, MnO, SiO_2 and a mixture thereof,~~ the content of ZnO ~~being~~ in the ZnO catalyst ranges from 10 to 90 % by weight based on the total weight of the catalyst.

4. (Currently Amended) The method of ~~claim 3~~ claim 1, wherein the ZnO catalyst further comprises an oxide of Cu or Mn in an amount of 0.01 to 60 % by weight based on the total weight of the catalyst.

5.-7. (Cancelled).

8. (Currently Amended) ~~The method of claim 2, wherein~~ A method for producing dimethylether (DME), which comprises the steps of:

(i) introducing a feed gas mixture containing hydrogen and CO to a DME synthesis reactor, wherein the feed gas mixture is reacted in the presence of a

methanol synthesis catalyst and an acid catalyst for the dehydration of methanol, to provide a crude product stream containing DME and CO_2;

(ii) separating the crude product stream into a CO_2 rich stream and a DME rich stream;

(iii) introducing the CO_2 rich stream to a reverse water gas shift (RWGS) reactor wherein it is reacted with hydrogen separately introduced in the presence of an oxide catalyst to provide a CO rich stream, while recovering the DME rich stream as a product, the oxide catalyst ~~is~~ being NiO supported on or coprecipitated with an oxide selected from ~~Cr_2O_3,~~ Al_2O_3, ZrO_2, MgO, SiO_2 and a mixture thereof, ~~the content of NiO being 1 to 20 % by weight, preferably 1 to 10 % by weight based on the total weight of the catalyst~~ and the reaction in the reverse water gas reactor being carried out at a temperature ranging from 700 to 900 ℃; and

(iv) recycling the CO rich stream to step (i).

9. (Original) The method of claim 1, wherein the molar ratio of hydrogen and CO in step (iv) is controlled to 0.9 ~ 1.5: 1.

10. (New) The method of claim 8, wherein the content of NiO in the NiO catalyst ranges from 1 to 20 % by weight based on the total weight of the catalyst.